United States Department of the Interior

FISH AND WILDLIFE SERVICE
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April 25, 2017

To: Interested Parties

From: Scott Voss, Fish Biologist, Red Bluff Fish and Wildlife Office

Subject: Biweekly report (April 9, 2017 - April 22, 2017)

Please find attached preliminary daily estimates of passage, 90% confidence intervals, and fork length ranges of unmarked juvenile salmonids sampled at Red Bluff Diversion Dam for the period April 9, 2017 through April 22, 2017. Race designation was assigned using length-at-date criteria.

This report also contains graphical displays of salmonid passage dating back to 2009 for comparison.

Please note that data contained in these reports is subject to revision as this data is preliminary and undergoing QA/QC procedures.

If you have any questions, please feel free to contact me at (530) 527-3043 ext 243.

Table 1.— Preliminary estimates of passage by brood-year (BY) and run for unmarked juvenile Chinook salmon and steelhead trout captured by rotary-screw traps at Red Bluff Diversion Dam (RK391), Sacramento River, CA, for the dates listed below. Results include estimated passage, peak river discharge volume, water temperature, turbidity, and fork length (mm) range in parentheses. A dash (-) indicates that sampling was not conducted on that date.

Date	Discharge volume (cfs) [1]	Water temperature (°C)	Water turbidity (NTU)	Estimated passage					
				BY16 Winter	BY16 Spring	BY16 Fall	BY17 Late-Fall	BY17	RBT
4/9/2017	25,200	11.4	–	–	–	–	–		–
4/10/2017	17,300	11.8	–	–	–	–	–		–
4/11/2017	16,100	11.8	13.7	0 (–)	21,867 (79 – 92)	53,552 (51 – 78)	282 (33)		0 (–)
4/12/2017	16,500	11.3	13.2	0 (–)	14,818 (80 – 104)	31,138 (38 – 79)	0 (–)		0 (–)
4/13/2017	27,700	11.1	13.4	0 (–)	251,794 (80 – 90)	1,968,953 (61 – 79)	0 (–)		0 (–)
4/14/2017	31,800	10.6	–	–	–	–	–		–
4/15/2017	31,700	11.0	–	–	–	–	–		–
4/16/2017	31,300	10.8	–	–	–	–	–		–
4/17/2017	31,600	10.7	17.7	0 (–)	1,551 (84 – 88)	3,701 (54 – 81)	3,601 (31 – 37)		0 (–)
4/18/2017	32,400	11.4	17.2	0 (–)	2,563 (83 – 92)	7,295 (58 – 83)	860 (35 – 37)		0 (–)
4/19/2017	36,462	11.5	–	–	–	–	–		–
4/20/2017	37,748	11.6	–	–	–	–	–		–
4/21/2017	39,668	11.7	–	–	–	–	–		–
4/22/2017	37,990	11.9	18	0 (–)	0 (–)	1,503,806 (58 – 83)	0 (–)		0 (–)
Biweekly Total [2]				**0**	**682,717**	**8,326,372**	**11,067**		**0**
Biweekly Lower 90% Confidence Interval				0	-278,416	-11,150,765	-6,948		0
Biweekly Upper 90% Confidence Interval				0	1,643,850	27,803,508	29,082		0
Brood Year Total				**537,519**	**913,177**	**16,970,176**	**12,195**		**1,360**
Brood year Lower 90% Confidence Interval				385,409	-272,722	-14,515,345	-6,547		-1,059
Brood year Upper 90% Confidence Interval				689,630	2,099,077	48,455,698	30,937		3,777

[1] Peak daily discharge values do not account for diversions at RBDD and only represent peak flows registered at the Bend Bridge Gauging station (http://cdec2.water.ca.gov/cgi-progs/queryFx?bnd).

[2] Biweekly totals may be greater than the sum of the daily estimates presented in this table if sampling was not conducted on each day of the biweekly period. A dash (-) denotes those dates. To estimate daily passage for days that were not sampled, we impute missed sample days with the weekly mean value of days sampled within the week.

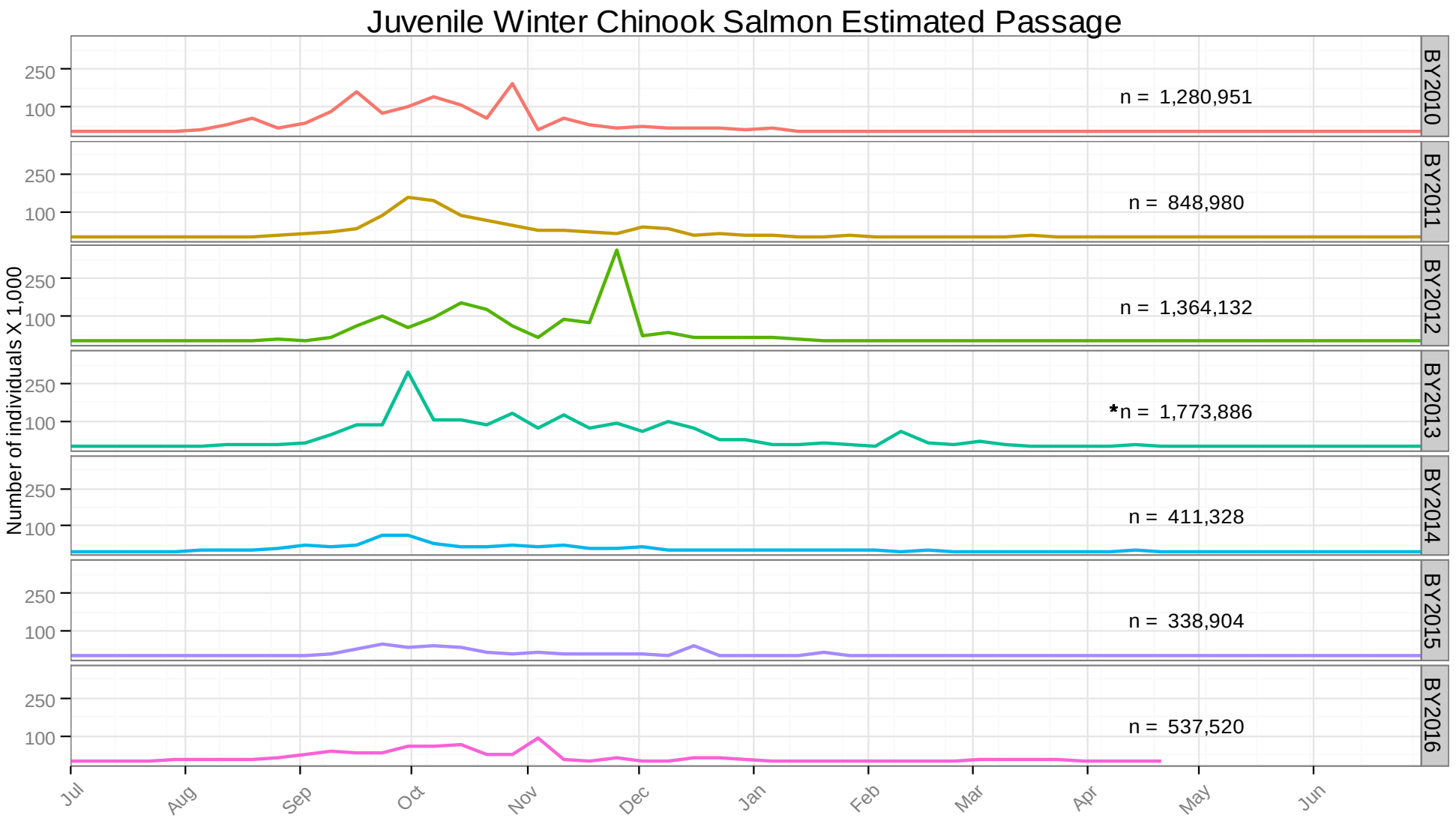

Figure 1. Weekly estimated passage of unmarked juvenile winter Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period July 1, 2010 to present .

*Winter run passage value interpolated using a monthly mean for the period October 1, 2013 - October 17, 2013 due to government shutdown .

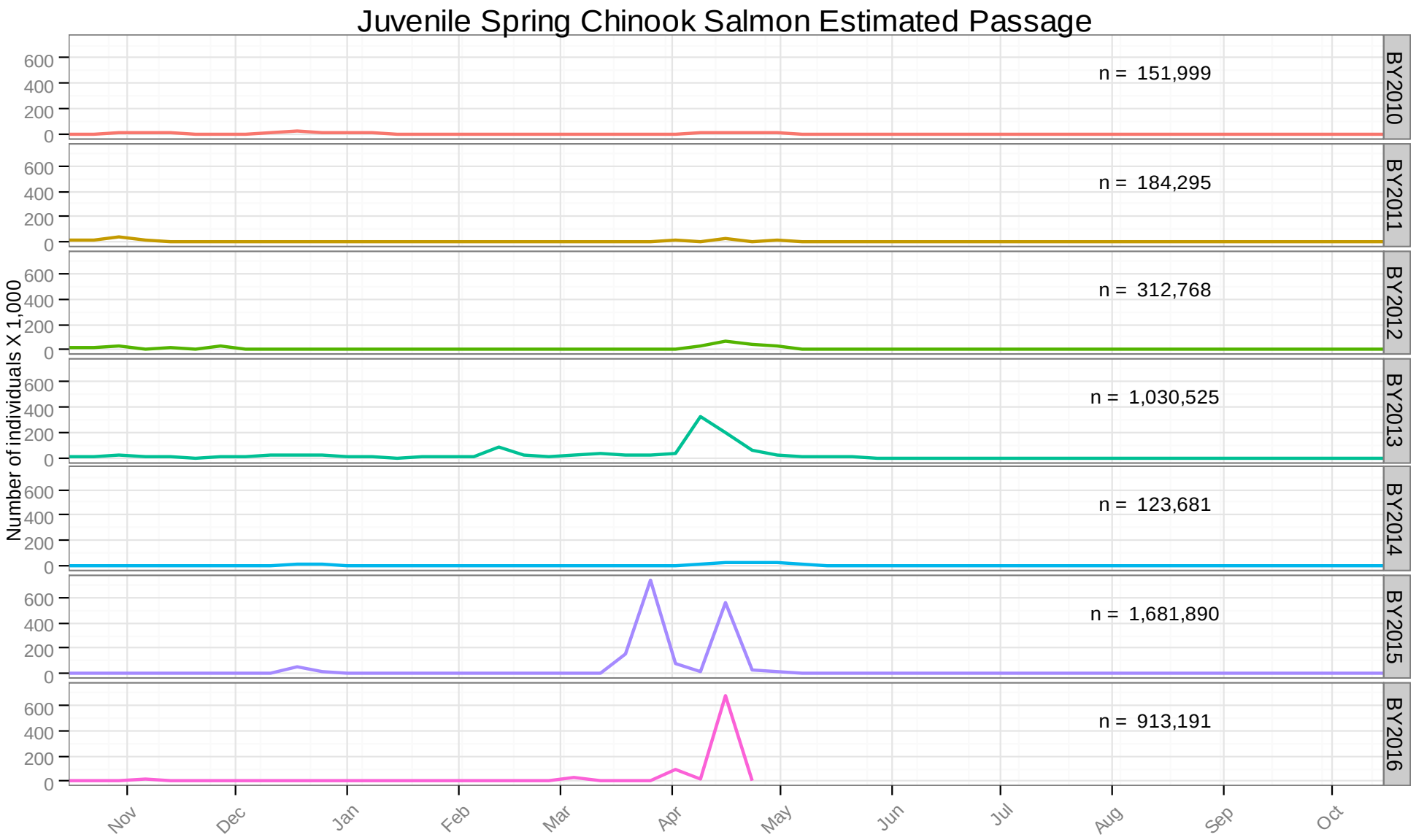

Figure 2. Weekly estimated passage of unmarked juvenile spring Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period October 16, 2010 to present .

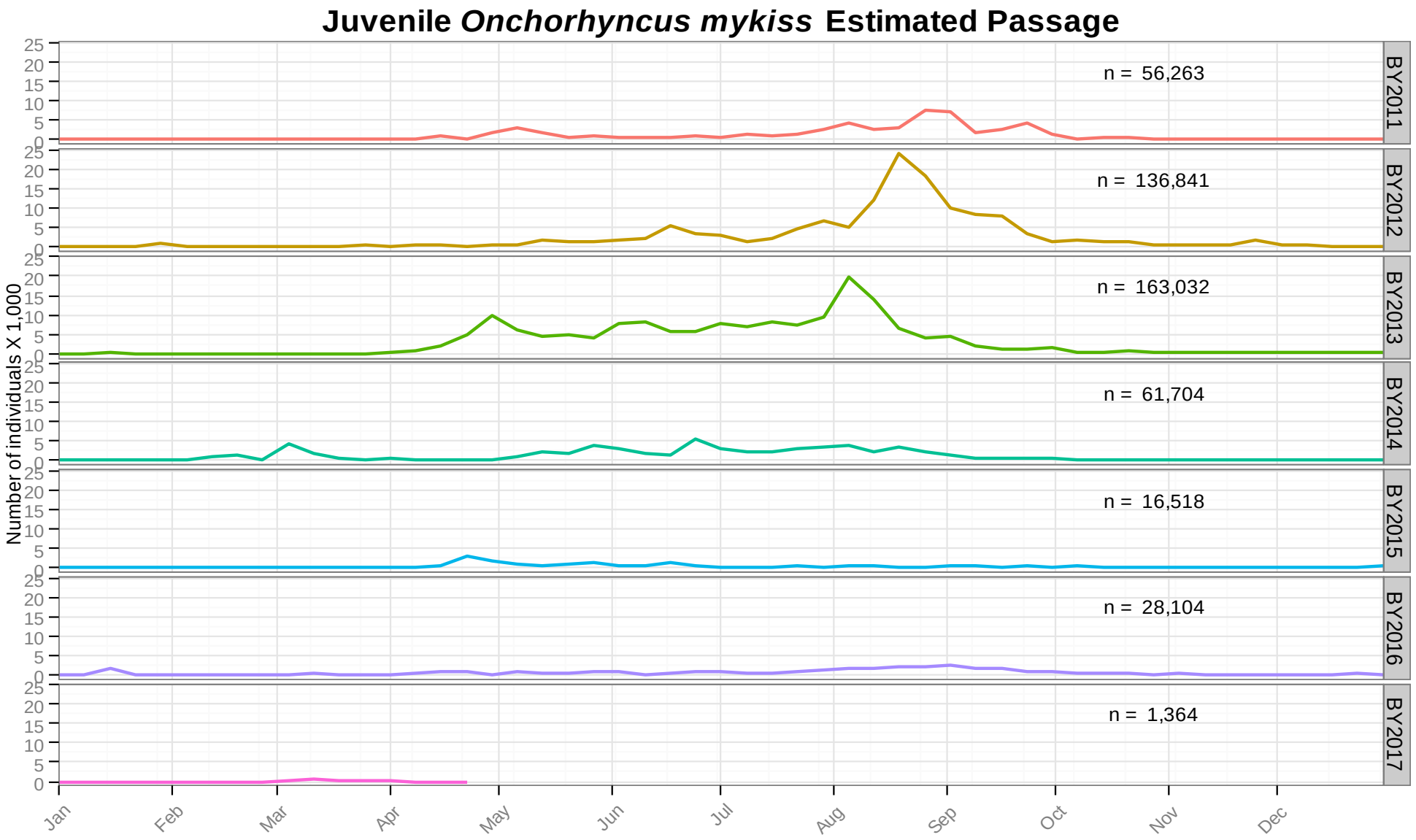

Figure 3. Weekly estimated passage of unmarked juvenile Rainbow/Steelhead trout at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period January 1, 2011 to present .

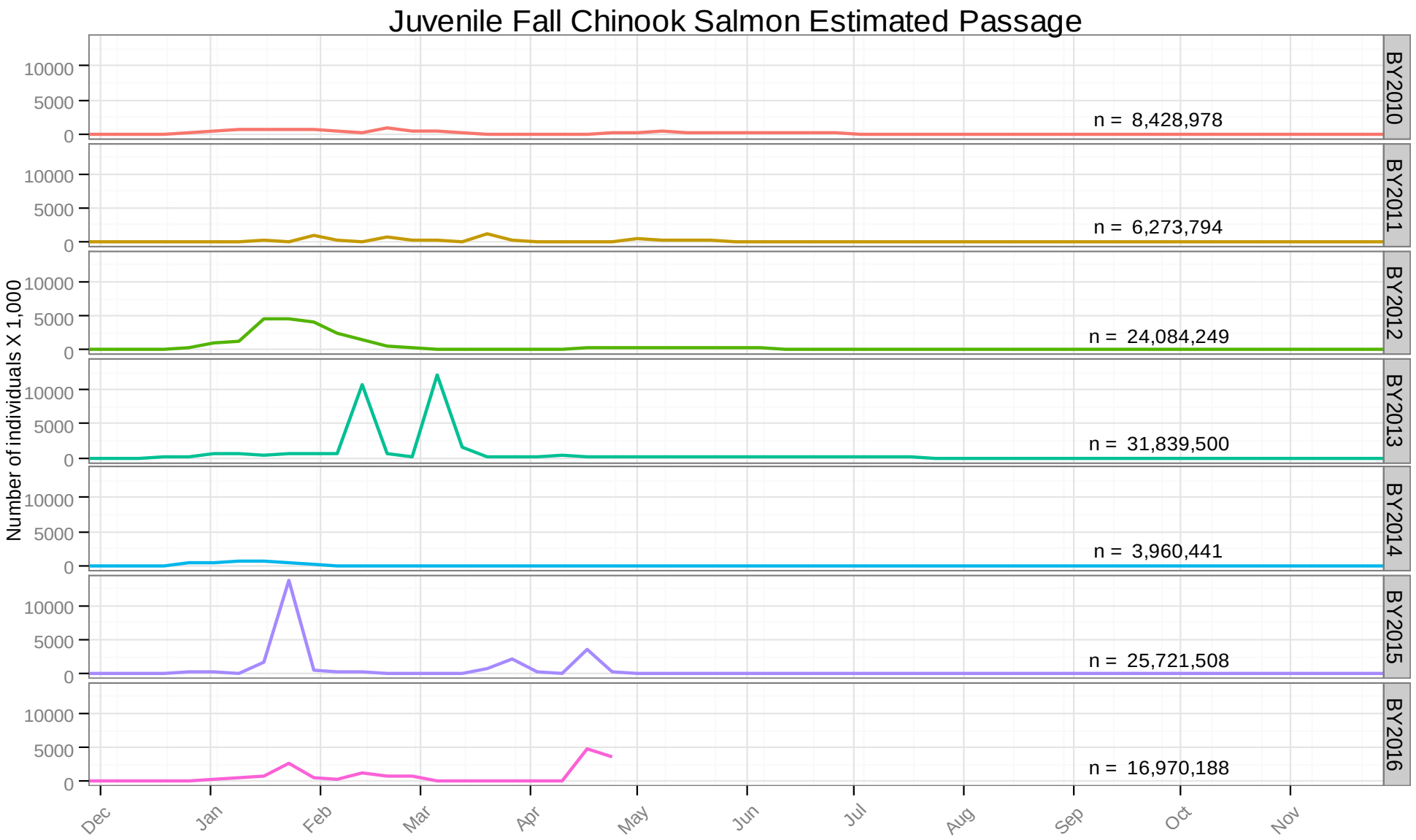

Figure 4. Weekly estimated passage of unmarked juvenile fall Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period December 1, 2010 to present .

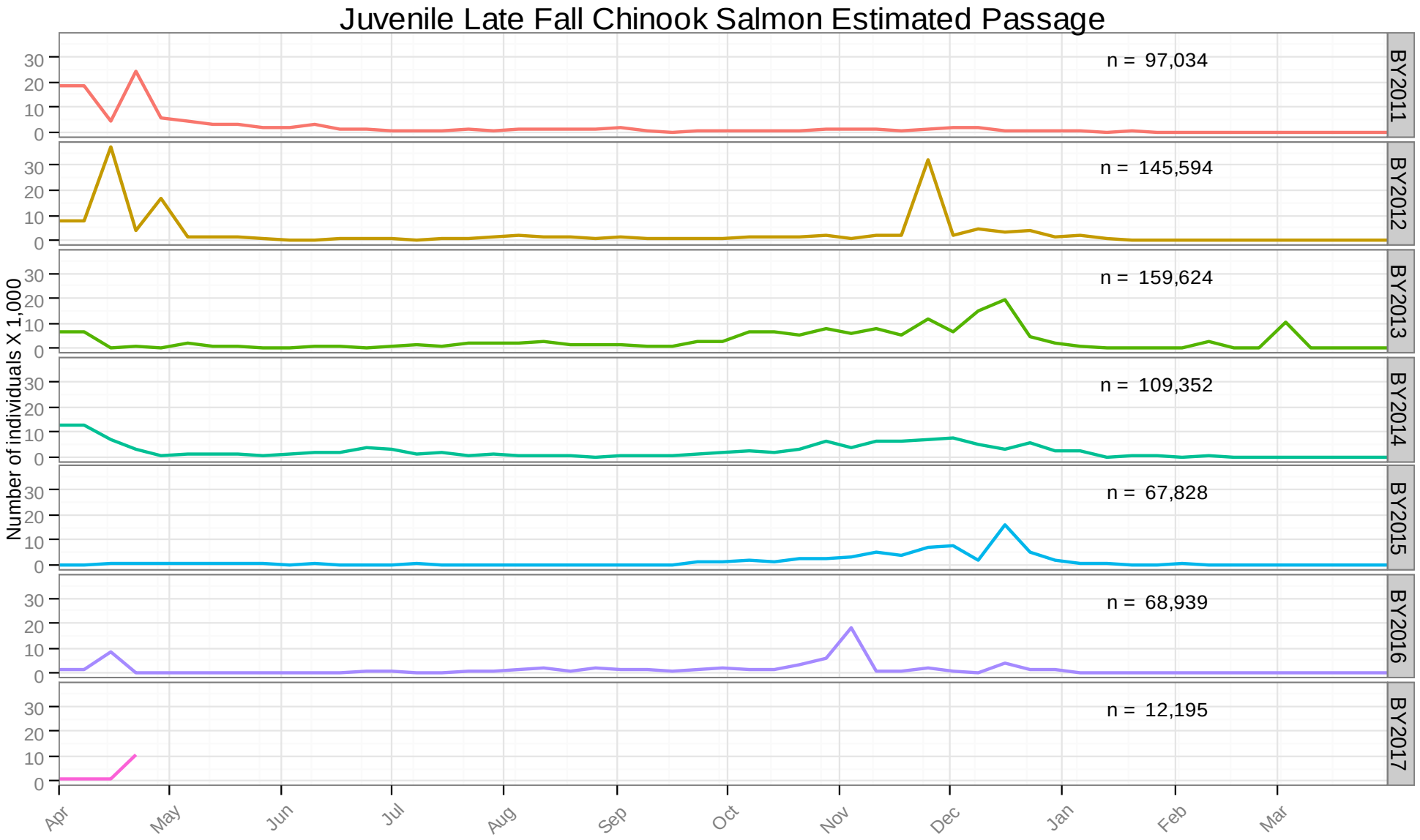

Figure 5. Weekly estimated passage of unmarked juvenile late fall Chinook salmon at Red Bluff Diversion Dam (RK391) by brood-year (BY). Fish were sampled using rotary-screw traps for the period April 1, 2011 to present .

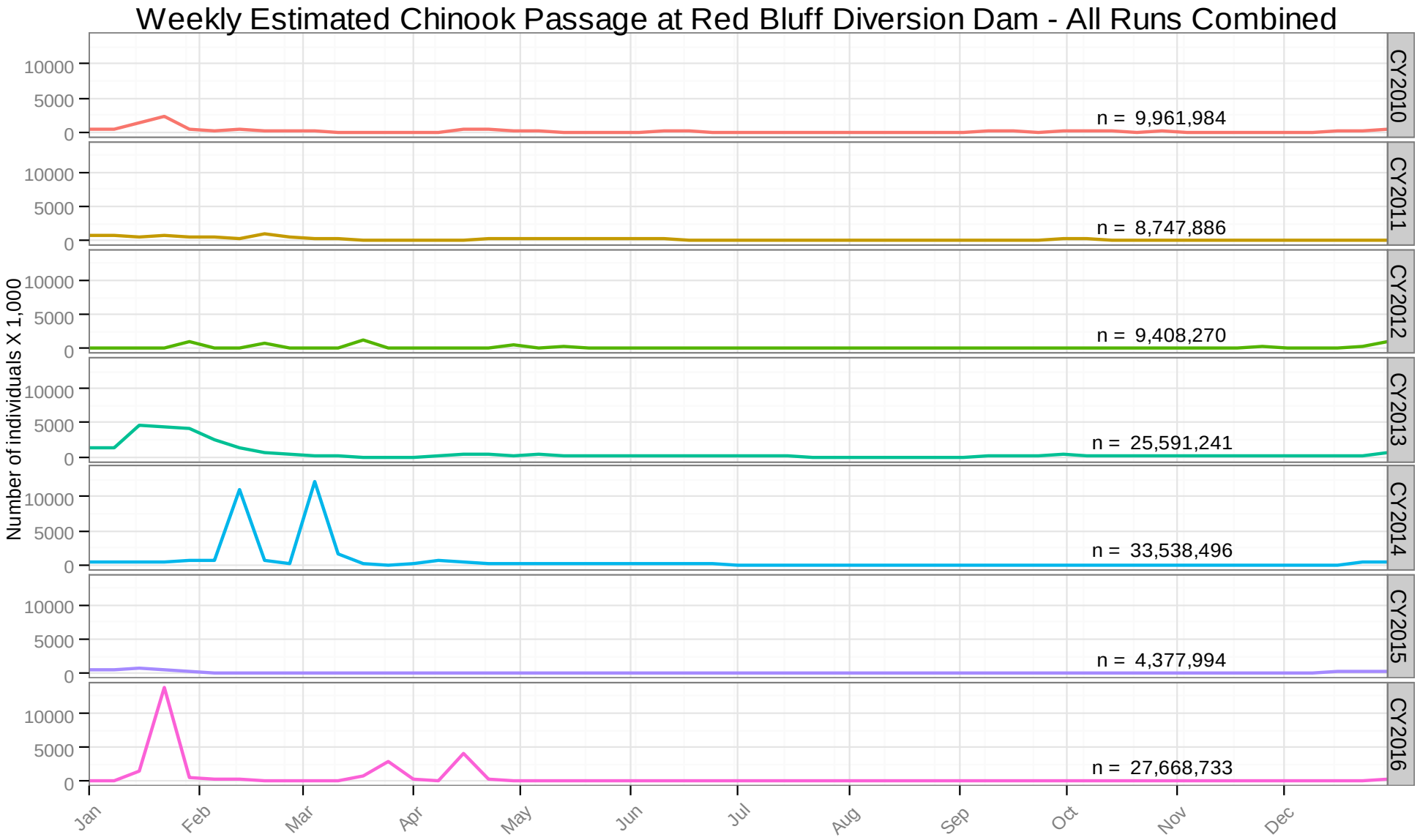

Figure 6. Weekly estimated passage of unmarked juvenile Chinook salmon at Red Bluff Diversion Dam (RK391) by calendar year. Fish were sampled using rotary-screw traps for the period January 1, 2010 to December 31, 2016